COLLEGE OF AGRICULTURE, GWALIOR (M.P.)

Annual Report 2012-13

Executive summary

This oldest college of the state of Madhya Pradesh was established in 1950 with the affiliation to Agra University and then with Vikram University, Ujjain. In the year 1964, after establishment of Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, this College was one of Constituents the colleges of JNKVV, Jabalpur. On 19th August 2008 a new Agricultural University- Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya was established by be function of JNKVV, Jabalpur with head quarter at Gwalior and this college compose came under the jurisdiction of Rajmata Vijayaraje Scindia Krishi Vishwa Vidyalaya. This college is located at Gird region of Madhya Pradesh. Dean is the Chief Executive of the College. He is supported by light heads of the various Departments. Since its establishment the college has created a base for scientific research and education in a wide spectrum of areas, like teaching Research and Extension in Agriculture. It is offering education in Agriculture leading to B.Sc. (Ag), M.Sc. (Ag) and Ph.D degree. Rural Agricultural Work Experience and Experiential learning has also been introduced as an innovative programme in B.Sc (Ag) curriculum. The UG and PG teaching is imparted through electronic media (PowerPoint presentation). For Bachelor degree programme the admission is made through Pre Agriculture Test for Faculty of Agriculture conducted by MP Board of Professional Examination, Bhopal. Admission in Post-Graduate studies is given on merit basis. Ten per cent extra seats are created over and above the prescribed intake capacity for Indians NRIS living abroad and foreign nationals besides payment seats. The College has well equipped laboratories, library, instructional farm, ARIS cell linked with global information system, class-room facilities and highly qualified faculty. The students live in pleasant and intellectually stimulating environment with well-furnished hostels for boys and girls. Well-equipped Gymnasium, NCC, NSS, educational tours and agro-industrial information enable students to develop their personality, whereas placement cell guides them to choose the profession. Rural Agricultural Work Experience is imparted to the students to understand the real world situation and experiential learning programme for entrepreneurship development.

This college is also maintains a farm with 50 ha area under cultivation. It is mainly responsible for growing nucleus and breeder seed production of major crops viz. Soybean, moong, wheat, gram and pea.

Eight KVKs located at Gwalior, Datia, Morena, Sheopur, Ashok Nagar, Aron (Guna), Shivpuri, and Lahar are functioning as an innovative science based organizations for competently assessing, refining and transferring the recent agricultural technologies to the farmers. Agricultural Research station of Morena and Bagwai are functioning to generate technology under the jurisdiction of college.

Four All India Coordinated Research Projects namely AICRP on pearl millets, wheat, arid legume (Gwar) and weed science are functioning in the college. Nine schemes under state plan (Regional Research Scheme, IERP, Strengthening Regional Research Scheme, Millets Improvement Scheme, and Fodder scheme, Strengthening of Chemistry Section, Soil Testing Laboratory, Intensification of Mango Research and Agricultural Research Farm) are also going on in the college. One project on promotion of organic farming in M.P. has been recently sanctioned under RKVY. A centre for Niche Area of Excellence "Management of soil health and degraded lands for sustainable agriculture was established during the year 2011-2012 for a period of five years by ICAR. Preparation of soil health card by different soil testing laboratories of this zone is in progress. One project of MPCST on Rhizobium Survey and Isolation of Non- traditional Legumes of M.P is running under this college. One national project on Organic farming (Govt. of India, Ministry of Agriculture) also being run by the college.

1. Profile and mandate of the College:-

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The mandate of this college is to conduct educational, research and extension activities for enhancing. The productivity profitability and sustainability of agricultural production systems and to ameliorate quality of rural livelihood in the state of Madhya Pradesh.

The college offers undergraduate teaching programme for four years, post- graduate programme for two years and PhD programme for three years in seven departments viz Department of Agricultural Economics and Farm Management, Department of Soil Science and Agricultural Chemistry, Department of Extension Education and Rural Sociology,

Department of Horticulture, Department of Agronomy, Department of Plant Breeding and Genetics, and Department of Plant Pathology and Department of Entomology.

The six other departments viz. Department of Crop & Herbal Physiology, Department of Agriculture engineering, Department of Mathematics and Agricultural Statistics, Department of Livestock Production and Management, Department of Food Science and Department of Microbiology and biochemistry are also functioning in this college.

Total intake capacity of this college in UG is 84 (including payment seats) ICAR and NRI seats. The total intake capacity in PG is 64 and in PhD are 36 students. At present the college has 516 students including 126 girls. Modern teaching aids like computer, LCD Projectors and internet facilities are available for the students.

Rural Agricultural Work Experience and Experiential Learning have been introduced as innovative programme in UG Curriculum. In Experiential Learning three ICAR funded projects namely Protected Cultivation of Flowers and Vegetables, Post-harvest Technology & value addition under Hi-Tech Horticulture and Entrepreneurship introduction of bio-fertilizer, bio- pesticide & bio-control agents are going on in this college.

An independent ARIS Cell was established in the college for computer work for students as well as faults one member. This college has good library facilities having about 40,000 books and 33 journal related to agricultural science. CeRA facility of ICAR in the college has been started for efficient learning to the students and teaching staff through national and international journals. Good hostel accommodation and facilities are also available for boys and girls. The college has well developed grounds for volley ball, Kabaddi, kho-kho and gymnasium for students. Inter Collegiate Kho-Kho , volleyball, badminton, carom and chess was conducted in the college. National Service Scheme (NSS) and National Cadet Corps (NCC) programme are also running for the students. College is also running the placement cell for the placement of the students in various organizations.

This college also has a farm with 50 ha aera under cultivation. It is mainly responsible for growing nucleus and breeder seed production of major crops viz. Soybean, moong, wheat, gram and pea. Eight KVKs at Gwalior, Datia, Morena, Sheopur, Ashok Nagar, Aron (Guna), Shivpuri, and Lahar (Bhind) are functioning as an innovative science based organizations which are competently assessing, refining and transferring the agricultural technology for the farmers without any transmission loss. Agricultural Research station, Morena, Bagwai, are functioning to generate technology under the jurisdiction of college. Four All India Coordinated Research Projects namely AICRP on pearl millets, wheat, arid legume (Gwar) and weed science are going on in the college campus. Nine schemes under state plan

(Regional Research Scheme, IERP, Strengthening Regional Research Scheme, Millets Improvement Scheme, and Fodder scheme, Strengthening of Chemistry Section, Soil Testing Laboratory, Intensification of Mango Research and Agricultural Research Farm) are going on in the college. One project on promotion of organic farming in M.P. has been recently sanctioned under RKVY.

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Research units of this college has developed 30 varieties in various crops including 2 varieties of Wheat, 4 varieties of Pearl Millet,7 varieties of Sesame, 3 varieties of Rapeseed, 3 varieties of Coriander,4 varieties of Table Pea and 1each in Chickpea, Moong, Urd Pigeon Pea Guava , Tomato and cluster bean (Gwar).

2. Admission Procedure

For B.Sc. (Ag) :-Admission of candidates to Bachelor degree courses of the V.V. is made through the entrance test being conducted by professional examination Board Bhopal Madhya Pradesh (VYAPAM Bhopal) Candidates selected by ICAR entry Test is admitted over and above the prescribed seats from time to time. Admission of NRI is done subject to their for fulfillment of prescribed minimum admission requirement and other condition laid down by the Govt. of M.P. Department of Agriculture and V.V. from time to time .

For P.G and Ph.D:- Admission of candidates to master and Ph.D programme is made on merit base .However preference in given to the students to the V.V. The requirement of minimum OGPA /Percentage of marks for admission to Master and Ph.D degree programme in notified by the V.V. Admission of nominees of GOVT. of M.P./ICAR/GOVT.of India of NRI and V.V. is considered by providing additional seats subject to fulfillment of minimum admission requirements.

(1) Allocation of Seat and Roster :-

(A) for U.G			
S.No.	Category	Free seats	Payment seats
1	UR/NIL-X	20	04
2	UR/NIL-F	09	02
3	UR/NIL-FF	01	-
4	SC/NIL-X	06	01
5	SC/F	02	01
6	ST/NIL-X	09	02
7	ST/F	04	01
8	OBC/NIL-X	05	01
9	OBC/F	01	01
10	OBC/K	01	-
	TOTAL	58	13

ICAR Seats—15%

(B) **For P.G. & Ph.D-**

	Allotted (Seats)					
Subject/Category		UR	SC	ST	OBC	TOTAL
Agronomy	Free	2	1	-	1	4
	Payment	2	-	1	1	4
Soil Science	Free	2	1	1	-	4
	Payment	2	-	1	1	4
Pl. Pathology	Free	2	1	1	-	4
	Payment	2	-	1	1	4
Entomology	Free	2	1	1	-	4
	Payment	2	-	1	1	4
Genetics & P. B.	Free	2	1	-	1	4
	Payment	2	-	1	1	4
Agril. Econ. &	Free	2	1	1	-	4
F.M.	Payment	2	-	1	1	4
Extension	Free	2	1	-	1	4
	Payment	2	-	1	1	4
Fruit Science	Free	2	1	-	1	4
	Payment	2	-	1	1	4
Total		32	08	12	12	64
ICAR						04

(3) Students Strength:-

UG	I Year	II Year	III Year	IV Year	TOTAL
	109	69	79	72	329
			Pre.	Final	TOTAL
PG			68	87	155
Ph.D			18	40	58

5-Teaching Status:-

Semester wise number of course offered

UG:

Year	Course offered No.		Total credits	
	I Sem	II Sem	I Sem	II Sem
1st	08	09	21	22
2nd	09	08	22	20
3rd	08/	09	20	18
4th	05 (RAWE)	20 (Experiential Learning)	20	60
Total	**30**	**45**	**83**	**120**

PG:

S. No.	Department	Course offered (No)		Total credits	
		I Sem	II Sem	I Sem	II Sem
1	Agronomy	10	09	24	22
2	Agricultural Economics & Farm Management	10	11	20	25
3	Entomology	10	13	19	24
4	Extension Education	10	9	21	21
5	Horticulture (Fruits)	10	09	25	20
6	Plant breeding & Genetics	10	09	23	19
7	Plant Pathology	11	10	24	22
8	Soil Science & Agricultural Chemistry	10	09	21	18

PhD

S. No.	Department	Course offered (No)		Total credits	
		I Sem	II Sem	I Sem	II Sem
1	Agronomy	09	09	19	18
2	Agricultural Economics & Farm Management	09	09	19	20
3	Entomology	10	09	21	16
4	Extension Education	09	09	19	21
5	Horticulture (Fruits) Horticulture (Vegetables)	09 10	08 08	20 20	16 16
6	Plant breeding & Genetics	08	11	12	19
7	Plant Pathology	09	09	20	17
8	Soil Science & Agricultural Chemistry	09	10	18	20

6. A- Rural Agricultural Work Experience Programme (RAWE):-

Period	No. of Students	Name of Village Adopted	Technologies Disseminated among farmers
2012-13	74	Lalit pura Indrapura , Pandora, Sanora, Barodi. Thanpur, Karmich Kala, Rari Kala. Gowind pur, Rampura Sikrda	1. Hybrid Verities of Bajara 2. Water conservation Technology 3. Seed treatment in rabi pulses 4. Spacing, 5.Plant protection in soybean, Bajra, sesame, ground nut, pigeon pea. and mustard 6. Soil sampling, 7. Application of Micro-nutrients

B- Experiential Learning Programme:

Under the Experiential Learning Programme this college has been conducted following activities.

1-Post harvest Management and Value Addition

Under this programme, a unit of PHM and value addition (RTS unit) has been established and commissioned at college premises near horticulture nursery area. In this unit students of B.Sc. (Ag.) final year, IInd semester learn the various processes of making preserved products. In this connection, the students have practically learned to prepare RTS, Tomato Ketchup, Banana Chutney and Orange Squash etc. during the session.

As the unit has not been given license under FPO, hence commercial sale of products is not being done and unit is merely being used for practical purpose and sale at local level. The unit is in working condition.

2- Post cultivation

Under this programme two naturally ventilated poly house have been constructed in horticulture nursery area of size 20mX28m=560 sq m each. In these two NV poly- houses, each one is occupied by flowers and vegetables. In vegetables, cucumber variety Multi star and tomato variety Novara are performing well and crops are being harvested and sale to staff and students of the college.

3- Production:

Under ELPD 104 the students learn about the different irrigation methods an demonstrated sprinkler and drip irrigation methods. Demonstrated the different measurement methods of soil moisture and also guided the measurement of irrigation water through different flumes & guided regarding scheduling of irrigation water under critical stages of crops. The technology about the determination of infiltration rates, irrigation water quality test, water harvesting techniques and soil & water conservation measures were demonstrated.

Under ELPD 103 the students learned about integrated farming systems. Acquainted with more profitable upland, lowland and rain fed farming systems. Students learned about various enterprises i.e. dairy, sheep & goat rearing, poultry, apiculture, sericulture, aquaculture etc. Students visited vermicompost unit, biogas plant unit and mushroom cultivation.

7. Students Welfare Activities:-

(i) National Service Scheme (NSS)-

College of Agriculture, Gwalior has one NSS units which is affiliated with Jiwaji University, Gwalior and 116 students enrolled as NSS volunteers during the session 2012-13. In addition to the routine activities, the NSS organized various activities throughout the year not only at their own level. The motto of NSS is "NOT ME BUT YOU". It underlines that the welfare of an individual is ultimately dependent on the welfare of the society as a whole. This expresses the essence of democratic living and upholds the need of self-less service and appreciation of the other man's point of view and also consideration for fellow human beings. Therefore NSS volunteers shall strive for the well being of the society. The main aim of NSS is Development of personality of students through¬Community Service.

Programmes organized:

The Activities under NSS are two-fold, viz. i) Regular activities, which are undertaken during the working days of the semester, and ii) Special Camping activities for 07 days duration in the adopted village/urban slum during vacation. A number of activities were undertaken under the guidance of Dr. S.K. Badodiya NSS Programme Officer. Following activities are conducted during 2012-13.

- Organized special camp at Village; Maharjpura (Prajapita Brahmakumari Ashram) of Gwalior district during 5/022013 to 11/02/2013 and worked on the transfer of improved agriculture technology to the farmers by N.S.S youth. During camp period, information regarding IPM and INM were given to farmers on their fields and doors by the youth of N.S.S. or volunteer of N.S.S.
- Kisan Sangosthi is also organized with the staff of the college.
- AIDS awareness program.
- Plantation camp in the off campus as well as on campus.
- Various personality development programmes.
- Nursery preparation camp
- Blood donation camp
- Soil sample collection

- Vyasan Mukti Abhiyan is an initiative by NSS volunteer, to make people aware of ill effects caused by the consumption of Tobacco, Alcohol, Smoking. Youth Group Noida aware the ill effect by Vyasan Mukti Railee in different - different places.
- Yog shiksha camp for volunteer of N.S.S.
- Mediation camp for volunteer of N.S.S.
- Debate competition and other cultural activities were organized.

(ii)National Cadet Corps (NCC)

S.No.	Particulars	No. of Cadets
1.	Enrollment	107 Cadets
2.	"B" Certificate exam passed	12 Cadets
3.	"C" Certificate exam passed	05 Cadets
4.	NCC camp attended	58 Cadets
5.	Others	Cadets actively participated in Institutional training program as well as in national functions like Independence Day and Republic Day in the University.

(iii) Cultural activities:

The Inter Collegiate Youth Festival -2013 of the university was organized at college of agriculture, Indore. Twenty Students (11- Boys & 09 – Girls) of this college participated in different events of the of youth festival. Sangeet Shiromani was awarded to this college. The events wise awards of winner and runner were as follows.

S.No	Activities	Position
1	Clay modeling	Runner
2	Elocution	Winner
3	Debate	Winner
4	Mine	Runner
5	Solo Song	Winner
6	Group song Patriotic song	Runner
7	India Group song-	Winner
8	Dance	Runner

(iv) Sports / Extra Curricular Activities:

This college has taken part in all the games organized by V.V. Kabbdi, Kho-kho, volleyball, badminton, table tennis, carom, chess, High Jump, Long Jump were organized by college of agriculture Gwalior for selection of college team.

Inter collegiate sports:

100m., 400m, 800m, 1500m Race, High Jump, Long Jump, Athletics, and Kababdi games were organized at College of Agriculture Gwalior. In this tournament the teams of College of Agriculture Indore, Sehore, Mandsor, Khandwa and Gwalior were participated.

Performance of students in the various events organized by V.V. during this year is as follows.

Girls:

S.No.	Name of event	Position
1	Chess	Winner
2	Badminton	Runner
3	Table Tanis	Runner
4	Carom	Runner

Boys:

S.No.	Name of event	Position
1	Badminton	Runner
2	Kho-Kho	Winner

(v) Students counseling and placement:

During the year 2012-13, 35 students were selected from this College, through University Placement Cell in the different organizations viz., Reliance Dairy Food Ltd., New Delhi, ADO, RAEO, Banking Sector and Rajiv Gandhi Mission for Watershed Management etc.

8. Library and Documentation Service:-

a- Number of Books and Journals Available

S. No.	Items	Number
1	Book Bank SC/ST	3598
2	Book Bank OBC	898
3	Book Bank General	10158
4	General Books	24867
5	New Books purchased during 2012-13	353
6	Journals up to 2012	30
7	Journals (2012-13)	8

b- Facilities available:

1- Photocopy facility

2- CCTV for security

3- Internet facilities (CeRA)

4- Agricultural Data Base and e – books Facilities.

9- Infrastructure facilities developed for teaching up gradation:

S.No.	Department	Facilities Developed
1	Agricultural Economics and Farm Management	Nil
2	Soil Science and Agricultural Chemistry	1. New instruments viz TOC analyzer, soil particle analyzer, Autoclave, potentio-metric titrator, pH meter and EC meter were purchased to facilitate the research work and to give the practical knowledge of soil analysis. 2. One LCD projector was purchased which is to be fixed in seminar hall which is used by student and faculty for teaching, presentation etc. 3. New books were purchased to upgrade knowledge & departmental library is upgraded
3	Extension Education and Rural Management	Nil
4	Entomology	Nil
5	Plant Breeding and Genetics	1. Thermometer, Mini Tiller and Inverter with Battery were purchased 2. Chairs, iron board, Acrylic Board, R.O and laptop were purchased for up gradation of laboratory.
6	Plant Pathology	Nil
7	Agronomy	1. Renovation of laboratory (UG & PG) 2. Purchased agronomical equipments :
8	Horticulture	Nil

10- P.G Research:

M.Sc. Thesis Awarded

SN	Title of the thesis	Name of student	Chairman
Agril. Economics & F.M.			
1	Resource use efficiency of chickpea production in Gwalior district of M.P.	Ashish Kumar	Dr. J.S. Raghuwanshi
2	An economic study on production and marketing of soybean in Aaron block of Guna district	Hari Ram Verma	Dr. J.S. Raghuwanshi
3	An economic analysis of storage losses of wheat production in Gwalior district of M.P.	Indra Mangal	Dr. J.S. Raghuwanshi
4	An economic analysis of marketing of mustard crop in Morar block of Gwalior district of M.P.	Megha Sahu	Dr. J.S. Raghuwanshi
5	A study on impact of self help group on Economic status of farmers in Morar block of Gwalior dist. Madhya Pradesh.	Ajay Singh Bhadouriya	Dr. J.S. Raghuwanshi
6	A study on economics of mustard cultivation in Bhind district of M.P.	Brijesh Singh Chourasiya	Dr. A.M Jaulkar
7	Impact of post harvest management technique and marketing of wheat in Khargone district of M.P.	Ravindra Chouhan	Dr. A.M Jaulkar
8	Marketable surplus and post harvest losses of wheat in Gwalior district of M.P.	Shalendra Sharma	Dr. A.M Jaulkar
9	Impact of watershed programme on Beneficiaries in Shivpuri district of M.P.	Sandeep Sharma	Dr. A.M Jaulkar
10	A study on economics of Pigeon pea production in Khargone district of M.P.	Santosh Patidar	Dr. A.M Jaulkar
Agronomy			
11	Integrated weed management in cowpea [*Vigna unguiculata* (L)]	Ku. Anjana Kujur	Dr. K.S. Yadav
12	Effect of different fertility level and row spacing on yield and nutrient uptake of clusterbean [*Cyamopsis tetragonoloba* (L)]	Sh. Devendra Kumar Chaursiya	Dr. G.S. Rawat
13	Integrated weed management in Okra [*Hibiscus 14esculentus* (L). Moench]	Ku. Manju Baraiya	Dr. K.S. Yadav

15	Weed management in blackgram (*Vigna mungo*)	Ku. Nazma Mansoori	Dr. Surendra Singh Tomar
16	Weed management practices in clusterbean [*Cyamopsis tetragonoloba* (L) Taub.]	Ku. Renu Kushwah	Dr. G.S. Rawat
17	Effect of varieties and fertility levels on yield attributes and seed yield of pigeonpea [*Cajanus cajan* (L) Millsp]	Ku. Vinita Parte	Dr. S.S. Kushwah
Extension Education			
18	A study on Television Viiewing Behaviour of Farmers in Deori block of Sagar District M.P	Anjali Shukla	Dr. M.M.Patel
19	A study on Career choices Among Under Graduate and Post Graduate Student RVSKVV Gwalior	Mitlesh Sharma	Dr. M.M.Patel
20	A study on ICT exposure Regarding Animal Husbandry Practices of Dairy Farmers in Morar Block Gwalior district of M.P.	Nemi Chand Meena	Dr. S.K.Badodiya
21	impact of traning prograamme of KVK on wheat production technology among the farmer of ehitarwar block gwalior district of M.P.	Narendra Singh Yadav	Dr. O.P Daipuria
22	A study on Knowledge and adoption of organic farming among the farmer of morar block gwalior district M.P	Abhishek Jaiswal	Dr. O.P Daipuria
23	A study on Tribal Farmers of kesla block of Hoshangabad district Madhya Pradesh refence to management of Eco- Friendly Practices of Vegetable Crops	Chhotelal Gour	Dr. S.K.Badodiya
Plant Breeding & Genetics			
24	Study of selection Parameters for yield and its Contributing traits in Prohybrids of Summer Pearlmillet	Swapnil Muzumdar	Dr. A.K.Singh
25	Character association and genetic divergence studies in sorghum bicolour	Rakesh Chandra Bairwa	Dr. A.K. Sharma
26	Inhertance of grain yield and its component in Bread	Ms.Preeti Raj	Dr. V.S.Kandalkar

	Wheat		
27	Variability and genetic divergence studies in Soybean	Mukesh Solanki	Mr.Sudhanshu Jain
28	Study of Direct and indirect selection parameters in Indian Mustard.	Ram Singh Solanki	Dr.A.K.Singh Mr.D.Awasthi(Co Chairman)
29	Relative efficacy of various single plant selection criteria in F2 populations on Yield and its components in wheat	Dilip Mujalda	Dr. A.K.Sharma
30	D2 statistics in chickpea under rainfed conditions	Jeetendra Jaiswal	Mr.Sudhanshu Jain
31	Quantitative analysis for yield and its components in Indian mustard	Divya Prakash Maravi	Dr.V.K.Tiwari
32	Combining ability analysis studies among restorers of pearl millet	Raghunandan Patidar	Mr.Y.M.Indapurkar
Horticulture			
33	Effect of IBA and bio-fertilizers augmented growing media on air layered plants of guava (*Psidium guajava* L.) cv. Gwalior 27.	Megha Rajput	Dr. K.N. Nagaich
34	Effect of nutrients and planting methods on growth and yield of late kharif onion (*Allium cepa* L.) cv. Agrifound Dark Red.	Yogesh Tiwari	Dr. A.K. Barholia
35	Effect of N, P and K on growth, yield and quality of beetroot (*Beta vulgaris* L.) cv. Deep Red.	Swapna Chouhan	Dr. R. Lekhi
36	Effect of integrated nutrient management practices on growth and yield of chilli (*Capsicum annum*) cv. Pusa Jwala.	Kalu Singh Vasuniya	Dr. K.N. Nagaich
37	Studies on the performance of different tomato (*Lycopersicon esculentus* Mill.) varieties under Gwalior conditions.	Madroop Meena	Dr. K.N. Nagaich
38	Performance of different chrysanthemum (*Chrysantehmum morifolium*) varieties under gird regions.	Priyanka Bhadauria	Dr. K.N. Nagaich

39	Response of gibberllic acid and nitrogen on radish (*Raphanus sativus* L.) cv. Hill queen.	Laxmikant Pachauri	Dr. K.N. Nagaich
Soil Science			
40	DTPA extractable micronutrients (Fe, Mn, Cu and Zn) in soil of Morena district of Madhya Pradesh.	Jaideep Singh Bhadauria	Dr. S.K. Dubey
41	Nitrogen use efficiency under INM practices in mustard crop in Alluvial soil of Gird zone.	Pawan Patel	Shri P.S. Tomar
42	Dynamics of some soil quality parameters as influenced by different plant materials and fertilizer nitrogen.	Chhaya Pawar	Dr. S.K. Trivedi
43	Behaviors of water and nitrate movement in Typic Ustochrepts soils of Northern Madhya Pradesh.	Ku. Shikha Chauhan	Dr. S.K. Verma
44	Performance of berseem varieties at different levels of nitrogen and Phosphorous	Dinesh Nargesh	Dr. S.K. Trivedi
45	Effect of integrated nutrient management on Physico-Chemical properties under long term pearl millet-mustard cropping sequence in a sandy clay loam soil	Pawan Narwaria	Dr. R.A.S. Tomar
46	Charavterization and classification of salt affected soils of Kailaras block of Morena	Mukesh Kumar Damar	Dr. Y.P.Singh
47	Effect of integrated nutrient management in depletion build up of DTPA- extractable micronutrient cations under pearl millet- mustard cropping sequence.	Sunil Rajput	Shri P.S. Tomar
Entomology			
48	Incidence of Pod borer complex on different varieties of pigeon pea [Cajanus cajan (L.) millsp.] at different fertility levels.	Chitra Patel	Dr. S.N. Upadhyay
49	Bioefficacy of newer insecticides against gram pod borer. (Helicoverpa armigere Hubner).	Brajesh Meena	Dr. N.S. Bhadoria
50	Bio efficacy of chemical and botanical insecticides against mustard aphid, Lipaphis, erysimi (Kalt.) and their natural enemies.	Girraj Prasad Vaishnav	Dr. U.C. Singh
51	Screening of sorghum [sorghum bicolor (L.) Moench] Germplasm against major insect pest.	Shahin khan	Dr. N.S. Bhadoria

52	Studies of pest complex of brinjal with special refrence to IPM of brinjal.	Narendra Sharma	Dr. N.S. Bhadoria
53	Efficacy of newer insecticides along with neem oil against mustard aphid, Lipaphis erysimi (Kalt.) and their natural enemies.	Kailash Singh Jatav	Dr. N.S. Bhadoria
54	Studies on evolution of Northern region dual purpose sorghum genotypes for shoot fly / stem borer.	Purushottam Mandloi	Dr. S.N. Upadhyay
55	Studies on insect pest complex of soybean in Grid Region.	Sharad Raghuwanshi	Dr. N.S. Bhadoria
56	Studies on reaction of sorghum [Sorghum bicoor(L.) Moench] varieties against major insect pests.	Lokendra Jatav	Dr.V.K. Shrivastava
Plant Pathology			
57	"Studies on some aspects of Pearl millet caused by *pyricularia setariae* Niskado.27.01.12	Ravi yadav	Dr. R.K.Pandya
	Evaluation of *Ipomea carnea* leaf extract against some fungal pathogens. 2.4.12	Ahsaram pal	Mrs. Rajni Singh Sasode
	Evaluation of Tagetes erecta against some fungal pathogens	Asutoh Gupta	Dr. Reeti Singh
	Evaluation of *Aloe vera* against some fungal pathogens. 20.8.12	Ajay Sharma	Mrs. Rajni Singh Sasode
	Evaluation of *Garlic(Allium Sativum) extract* against some fungal pathogens.	Purshotam Yadav	Mrs. Rajni Singh Sasode
	Studies on antifungal activities of *Withania somnifera*	Pushpa Parma	Dr.Reeti Singh

PhD. Thesis Awarded:

SN	**Title of the thesis**	**Name of student**	**Chairman**
Soil Science			
1	Influence of Nutrient Management on Carbon Sequestration and Nutrient Status of Typic Ustocrepts under Long Term Pearl millet – Mustard Cropping Sequence.	Ms. Khambalkar Priyadarshini Arun	Dr. S. K. Verma

11- Event organized: -

i. Soil Health card distribution to the farmers of Banwar village Bhitarwar, Gwalior

ii. Launching & inauguration ceremony of the newly sanctioned project under NICRA "Identification of efficient integrated modules for sustainable management of ravines (Chambal) and carbon sequestration for climate resilience in Madhya Pradesh

12- Publications:

a- Research papers:

Asha Arora, Dubey, S.K. and Rajput, R.L. (2012). Persistence of herbicides applied to soybean and its effect on soil microbial population paper presented in National Biennial Confrence of Indian Society of Weed Science on weed threat to agriculture, biodiversity and environment April 19-20, 2012 at Kerala Agricultural University Thrissur (Kerala), 57.

Arora Asha (2012). Leaching behaviour of pendimethalin in sandy clay loam soil of Northern Madhya Pradesh. Sent for publication Indian Journal Weed Science article no. IJWS/12/257.

A.M. Jaulkar, Yadav, K.S. and Rajput, R.L. (2012). Yield gap analysis of wheat and pea through front line demonstration. Paper presented in National Biennial Conference of Indian Society of Weed Science on weed threat to agriculture, biodiversity and environment April 19-20, 2012 at Kerala Agricultural University Thrissur (Kerala), pp. 142.

Dubey, S.K., Arora Asha and Gurjar (2011). Effect of Quizalofop and Chlorimuron ethyl with Bradyrhizobium iaponicum on Terminal Fertility of soil under soybean in inceptisols. Sent for publication Indian Soybean Jouarnal Research. Paper 20/2011.

Nisha Bhadauria, Asha Arora and K.S.Yadav (2012). Effect of weed management practices on seed yield and nutrient (NPK) uptake in sesame. Sent for publication Indian Journal of Weed Science article no. IJWS/12/258.

Rawat, G.S., Rajput R.L., and Rawat, Upama (2012). Effect of different critical stages of irrigation on productivity and yield attributes of cluster bean [*Cyamopsis tetragonologa* (L) Taub.] Bhartiya Krishi Anusandhan Patrika 27 (1): 69-72.

Rawat, G.S. and Rajput R.L., (2012). Nutrient management for pearl millet (*Pennisetum glaucum*). Indian Mustard (*Brassica juncea*) cropping system (accepted in Advances in Plant Science)

Rawat, G.S. and Rajput, R.L. (2012). Integrated nutrient management for pearl millet (*Pennisetum glaucum*) Chickpea (*Cicer arietinum*) cropping system. (accepted in Advance in Plant Science).

R.L. Rajput, Yadav, K.S. and Jaulkar, A.M. (2012). Bioefficacy of herbicides for control of weeds in irrigated wheat. Paper presented in National Biennial Conference of Indian Society of Weed Science on weed threat to agriculture, biodiversity and environment April 19-20, 2012 at Kerala Agricultural University Thrissur (Kerala), pp. 90.

Yadav, K.S., Tomar, S.S., Rajput, R.L. and Jaulkar, A.M. (2012). Integrated weed management in sesame. Paper presented in National Biennial Confrence of Indian Society of Weed Science on weed threat to agriculture, biodiversity and environment April 19-20, 2012 at Kerala Agricultural University Thrissur (Kerala), pp. 143.

Yadav, K.S., Rajput, R.L. and Jaulkar, A.M. (2012). Integrated weed management studies in onion. Paper presented in National Biennial Confrence of Indian Society of Weed Science on weed threat to agriculture, biodiversity and environment April 19-20, 2012 at Kerala Agricultural University Thrissur (Kerala), pp. 144.

Badodiya S.K., Sadhana Tomer, M.M.Patel and O.P.Daipuria (2012) Impact of Swarna Jayanti Gram Swarozgar Yojana on poverty alleviation. *Indian Research Journal of Ext. Edu*. 12(3):37-41

Badodiya S.K Gaur C.L P.Sharma & Hari Ram (2012) Contact farming: An approach for agriculture development. *Indian Research Journal of Ext. Edu* Special Issue 145-147

Badodiya S.K., Kamlesh Sharma, & S.K.Garg (2012) Assessment of information on need of the farmers about mustard production Technology. *Asian J Exten Edun* 29 : 102-105

Badodiya S.K., R.S.Kushwah, S.K.Garg, S.K.Shakya (2012) Impact of Mahatma Gandhi National Rural Employment Guarhtee ACT (MMREGA) on poverty alleviation *Raj. J. Extension Education.* 19: 206-209

Singh,A.K. andMuzumdar;S.S.(2012) heat Tolerance of Pearlmillet Hybrids-A Study. Bhartiya Anisandhan Patrika (Accepted).

ParmarR.K., TikleA.N.andKandalkarV.S. (2012). Combining ability studies in pigeonpea [*Cajanuscajan*(L) Millsp] hybrids. *Journal of Food Legumes* 25(3): 231-233,

Trivedi, S.K. and Pachori Raman (2011) Effect of levels and sources of sulphur on yield, quality and uptake by mustard (*Brassica juncea*). *Prrogressive Agriculture* 12 (1) : 69-73

Priyadarshani A. Khambalkar, P.S. Tomar and S.K. Verma (2012). Long-term effects of integrated nutrient Management on productivity and soil fertility in peralmillet (*Pennisetum glaucum*) – mustard (*Brassica juncea*) cropping sequence. *Indian Journal of Agronomy* 57(3) : 222-228.

Pachori, Raman Kumar and Trivedi, S.K. (2011) Status of available micronutrient cations in soils of Shivpuri district, Madhya Pradesh. *Ann. Pl. Soil Res.* 13 (2) : 166-168.

Akhilesh Singh, G.S. Rajput, A.K. Bajpai and R.B. Singh (2012) Performance evaluation of a minor irrigation project. *IWRA (India) Journal.* Vol. 1 No. 1 Jan. 12.

Shashi S. Yadav, B.N. Swami, R.L. Shyampura and J.D. Gii (2011) Distribution of DTPA – extractable micronutrients in arid soils of western Rajasthan progressive Agriculture 2011, P 270-271.

Braj Kishor Rajput, Radha Krishna Sharma, S.K. Trivedi and D.S. Bhadauria – Status of DTPA extractable micronutrient cations under mustard growing area of northern Madhya Pradesh. 76th Annual convention: November 16-19, 2011, National seminar on developments in soil science 2011. (Abstracts of the 76th Annual convention)

Radha Krishna Sharma, S.K. Trivedi, Braj Kishor Rajput and Ankit Sharma – Sulphur Status and Their relationship with soil properties of Gird region of northern Madhya Pradesh. 76th Annual convention : November 16-19, 2011, National seminar on developments in soil science 2011. (Abstracts of the 76th Annual convention)

Tomar, K.S. and S.S. Tomar (2012) Effect of different dosage of growth regulators on rooting and survival percentage of pomegranate (*Punica granatum* L.) air layers. *Green Farming Int. J.,* **3**(6):701-703.

Tomar, K.S. and S.S. Tomar (2012) Effect of different doses of Nitrogen and Phosphorus on yield and quality attributes of guava. (*Psidium guajava* L.) var. Gwalior-27. *The Asian Journal of Horticulture,* **7** (2): 297-299.

b- Teaching Manual

"Dimension of agricultural extension" Author S.K.Badodiya, O.P.Daipuria , M.M.Patel

c- **Popular Articles**

बढ़ोलिया, ए.के. एवं राजेश लेखी (2012) मटर की अगेती खेती, *कृषक जगत* **67**(3) : 6

बढ़ोलिया, ए.के. एवं राजेश लेखी (2013) नदियों के कछार पर तरबूज– खरबूज की बहार, *कृषक जगत* **11**(20) : 6

13- Visits Abroad: Nil

14- Distinguished visitors:

i. Prof. J. (Jan) Fongers, Wageningen The Netherlands
ii. Dr. Jasti Prasad, Sr. Scientist, CRID Hyderabad.
iii. Dr. S.K. Dubey – I/c SWC&TC, Agra.
iv. Dr. V. K. Gupta, Dean, COA, Rajasthan.
v. Dr. V.S. Tomar, VC, JNKVV, Jabalpur.
vi. Dr. S.S. Kanna, Ex. Member of Planning Commission & V.C.
vii. Dr. Sushil Kumar, Principal Scientist, DWSR, Jabalpur
viii. Dr. A.R.G. Rangnathan, Director, DWSR-C, Jabalpur
ix. Sh. A. Henry, PC, Arid Legumes, CAZRI, Jodhpur with monitoring team on dated
x. Dr. D. Kumar, E. Scientist, CAZRI, Jodhpur